REMARKS

Claims 2-12 are currently pending. Applicant thanks the Examiner for allowing claims 11 and 12. Independent claim 1 has now been cancelled while claims 2 and 7 have been amended. No new matter has been entered. A Request for Approval of Drawing Corrections is being filed concurrently with this Amendment to revise Figure 1 to be labeled as prior art.

Rejection of Claim 1 under 35 U.S.C. § 102(e)

Claim 1 has been rejected under 35 U.S.C. §102(e) as being unpatentable over U.S. Patent No. 5,966,387 to Cloutier.. In response, claim 1 has been cancelled.

Rejection of Claims 2-10 under 35 U.S.C. § 103(a)

Claims 2-10 were rejected under 35 U.S.C. §103(a) as being unpatentable over Cloutier in view of U.S. Patent No. 5,774,497 to Block et al. Claim 2 has now been amended into independent form through incorporation of the subject matter of its parent claim. Based on the following remarks, Applicants respectfully traverse this rejection.

Claim 2, as amended, calls for a method of compensating for non-constant delay times of a network transmitting MPEG-2 and MPEG-4 data packets, comprising the steps of:

> estimating a network system jitter associated with reference data packets carrying clock-stamped reference values, including calculating a mean jitter value associated with a sample of data packets; and

adjusting said clock-stamped reference values based on said estimated network system jitter

(emphasis added).

Cloutier discloses an apparatus and method for correcting jitter in data packets. However, as acknowledged in the Office Action, Cloutier does not disclose calculating a mean jitter value associated with a sample of data packets.

Block discloses a method of providing jitter measurement in a MPEG transport stream. However, similar to Cloutier, Block does not disclose calculating a mean jitter value for a sample of data packets. Instead, Block discloses a method where a PCR (program clock reference) sample value, representing a count of a system time clock used by the source system to generate the data stream, is extracted from the data stream received by the recipient system. A timestamp, which represents a time of arrival of the PCR sample value, is obtained from the local clock of the recipient system and is associated with the PCR sample value. Block then determines a line of best fit to a set of values comprising the PCR sample value and the timestamp, and previously received PCR sample values and associated timestamps. This line of best fit represents a reconstructed system time clock. After estimating a line of best fit, Block is able to determine a PCR jitter value for a PCR sample by determining a distance between the line of best fit and the PCR sample value. (See Figure 3, along with Block, 2:9-19) Accordingly, the focus of Block is on accurately reproducing the system time of the source system, and then deriving jitter values for individual PCR samples based on the reproduced or reconstructed system time. Nowhere does Block disclose the averaging of multiple jitter values for a sample of data packets.

Greater detail of the above process is found in the Detailed Description of the invention, where it is emphasized that jitter for each PCR sample value is measured as a deviation of the PCR sample value from the recovered system time clock. The system time clock is recovered using a linear regression model based on the local timestamps of the transport stream packets containing PCR sample values. (See Block, 4:41-47) Specifically, after two PCR sample values are received, a line connecting the sample values is drawn, the line representing a first estimation of the system time clock. As further PCR samples are received, a least square linear regression model is used to make successive estimations of the line of best fit, which represents the reconstructed system time clock. (See Block, 4:45-64)

A line of best fit, an example of which is illustrated in Figure 3, represents the recovered system time clock of the source system, and is a graph of time at which the packet was transmitted (normalized PCR sample value) as a function of PCR arrival time (normalized timestamp). (See Block, 4:65-5:4) Jitter is then assessed for each PCR value by determining the distance between each sample point and the line of best fit. (See Fig. 3, along with Block, 5:4-7) <u>To improve the effectiveness of the system, Block does not attempt to average any jitter values subsequently determined in relation to the line of best fit, but instead recalculates the slope and offset of the line of best fit, thereby determining a new line of best fit every time a new PCR sample value is received.</u> (See Block, 5:30-42)

Accordingly, the reference of Block discloses a method for reconstructing the system time clock of the source system that generates the MPEG stream of data. Based on this reconstructed system time clock, "PCR jitter values are then determined in real

time as the PCR sample values are received, without waiting for all PCR sample values to be received." As such, Block simply discloses that a determination of individual jitter values is based on a linear regression calculation that yields a reconstructed system time clock. Yet, compared to the invention as called for by claims 2-10, nowhere within Block is there disclosed a process for obtaining a mean jitter value associated with a sample of data packets, thereby providing smoother playback of MPEG video transmitted over a network. In view of the above, the 35 USC § 103(a) rejection of claims 2-10 should be withdrawn.

CONCLUSION

All objections and rejections having been addressed, it is respectfully submitted that the present application is in condition for allowance, and a Notice to that effect is earnestly solicited. Reconsideration and allowance is respectfully requested.

Any fees associated with the filing of this paper should be identified in any accompanying transmittal. However, if any additional fees are required, they may be charged to Deposit Account 07-2339.

Respectfully submitted,

Dated: 10/23/2003

By: James K Weixel

James Weixel, Esq.
Reg. No. 44, 399

Verizon Corporate Services Group Inc.
600 Hidden Ridge, HQE03H01
Irving, TX 75038
(781) 466-2220